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(54) LOCAL POSITIONING SYSTEM USING ULTRASONIC WAVE

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a local positioning system, enabling highly accurate actual time positioning by means of a simple method on either of the outdoor or the indoor.

SOLUTION: This local positioning system is provided with a transmitting means, arranged in three or more known points for respectively producing a signal including transmission source information and transmission time information and transmitting it as an ultrasonic wave signal, a transmission time synchronizing means for synchronizing the transmission times of the respective transmitting means mutually, a receiving means for receiving respective ultrasonic wave signals synchronously transmitted from the transmitting means in the at least three points, and a positioning means measuring the reception times of the respective ultrasonic wave signals respectively, specifying the transmission source and the transmission time of the signal from each of the received ultrasonic wave signals, calculating the distance between each of the transmitting means and the receiving means from the reception time and the transmission time, and deciding the position of the receiving means from the relationship between the positions of the transmitting means and the distances between the respective transmitting means and the receiving means.

